

# User Manual

## cMT-iV5 Startup Guide



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## Chapter1. Overview

### 1.1. Specification



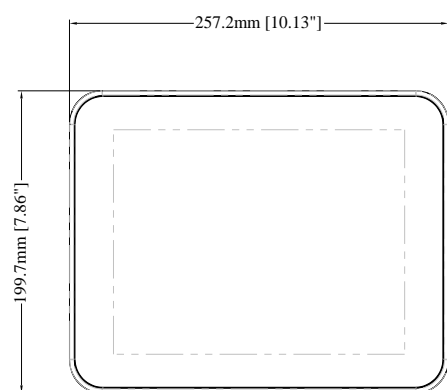
### Cloud Human Machine Interface

#### Features

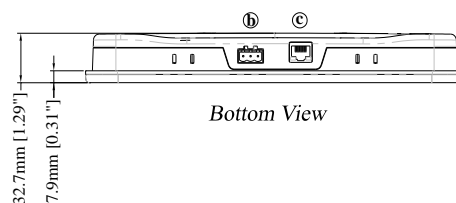
- 9.7" 1024 x 768 TFT LCD, LED Backlight
- Fan-less Cooling System
- Built-in 512 MB Flash Memory
- One Gigabit Ethernet Port
- Built-in mono speaker
- Built-in Power Isolator
- Designed for connecting cMT-SVR

Display	Display	9.7" TFT
	Resolution	1024 x 768
	Brightness (cd/m <sup>2</sup> )	350
	Contrast Ratio	500:1
	Backlight Type	LED
	Backlight Life Time	>30,000 hrs.
	Colors	262K
Touch Panel	Type	Tempered Glass, Capacitive Type
	Accuracy	Active Area Length(X)±2%, Width(Y)±2%
Memory	Flash	512 MB
	RAM	1 GB
Processor		32 bits RISC Cortex-A9 1GHz
I/O Port	SD Card Slot	N/A
	USB Host	N/A
	USB Client	N/A
	Ethernet	10/100/1000 Base T x 1
	COM Port	N/A
	RS-485 Dual Isolation	N/A
	CAN Bus	N/A
	HDMI	N/A
	Audio Output	Built-in Mono Speaker
RTC	Video Input	N/A
		Built-in
Power	Input Power	24±20%VDC
	Power Isolation	Built-in
	Power Consumption	900mA@24VDC
	Voltage Resistance	500VAC (1 min.)
	Isolation Resistance	Exceed 50MΩ at 500VDC
	Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)
Specification	PCB Coating	Yes
	Enclosure	Plastic
	Dimensions WxHxD	257.2 x 199.7 x 32.7 mm
	Panel Cutout	248.5 x 191 mm
	Weight	Approx. 0.76 kg
	Mount	Panel mount, VESA mount 75 x 75 mm
Environment	Protection Structure	NEMA4 / IP65 Compliant Front Panel
	Storage Temperature	-20° ~ 60°C (-4° ~ 140°F)
	Operating Temperature	0° ~ 50°C (32° ~ 122°F)
	Relative Humidity	10% ~ 90% (non-condensing)
Certificate	CE	CE marked
	UL	cULus Listed
Language	Display	English, French, Italian, Spanish, Russian, Simplified Chinese, Traditional Chinese, Korean, German
	Input Methods	English, French, Italian, Spanish, German, Russian, Pinyin, Zhuyin
Software		cMT Viewer

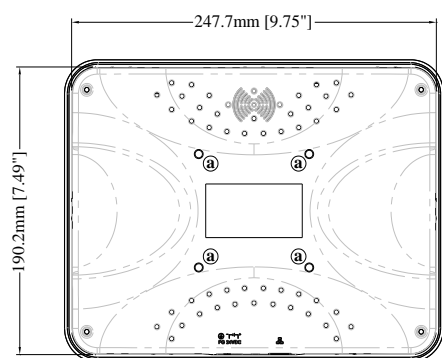
## 1.2. Dimensions



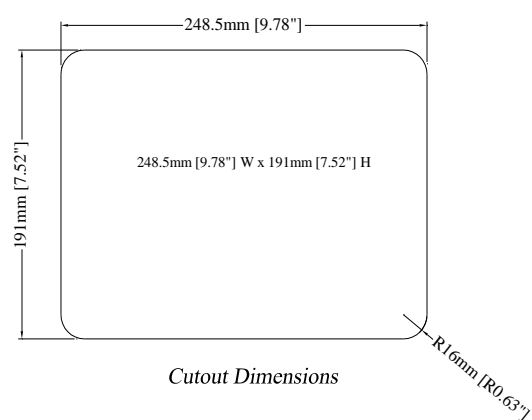
Front View



Bottom View



Rear View



Cutout Dimensions

<b>a</b>	VESA 75 mm screw holes	<b>c</b>	Ethernet Port
<b>b</b>	Power Connector		

### 1.3. Ethernet port

The unit has one 10/100/1000M Gigabit Ethernet port.

The LED indicators on the Ethernet port indicate:

Orange LED: LAN link status

Green LED: Active communication status

To connect Ethernet, please use a CAT-6 Ethernet cable.

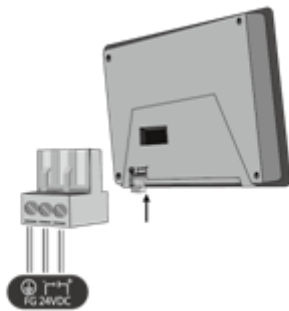
### 1.4. CR1225 battery

The cMT-iV5 requires a CR1225 coin type lithium battery to keep the RTC running.

Battery type: CR1225 3V lithium battery

### 1.5. Power connection

**Power:** The unit can be powered by DC power only, voltage range:  $24 \pm 20\%$  Volts DC, compatible with most controller DC systems. The power conditioning circuitry inside the unit is accomplished by a switching power supply. The peak starting current can be as high as 500mA.



**Note:** Connect positive DC line to the '+' terminal and the DC ground to the '-' terminal.

### 1.6. Requirements

1. cMT Viewer: Built-in app for connecting cMT-SVR.
2. Supported HMI model: cMT-SVR.
3. One cMT-iV5 can log in and operate three cMT-SVRs simultaneously.

## Chapter2. System Setting

Startup cMT-iV5 and run the built-in cMT Viewer app.



Tap the Start Button in the upper-left corner of the screen to open the setting page.

Tapping the checkerboard area returns to the previously used project screen.

### 2.1. Information

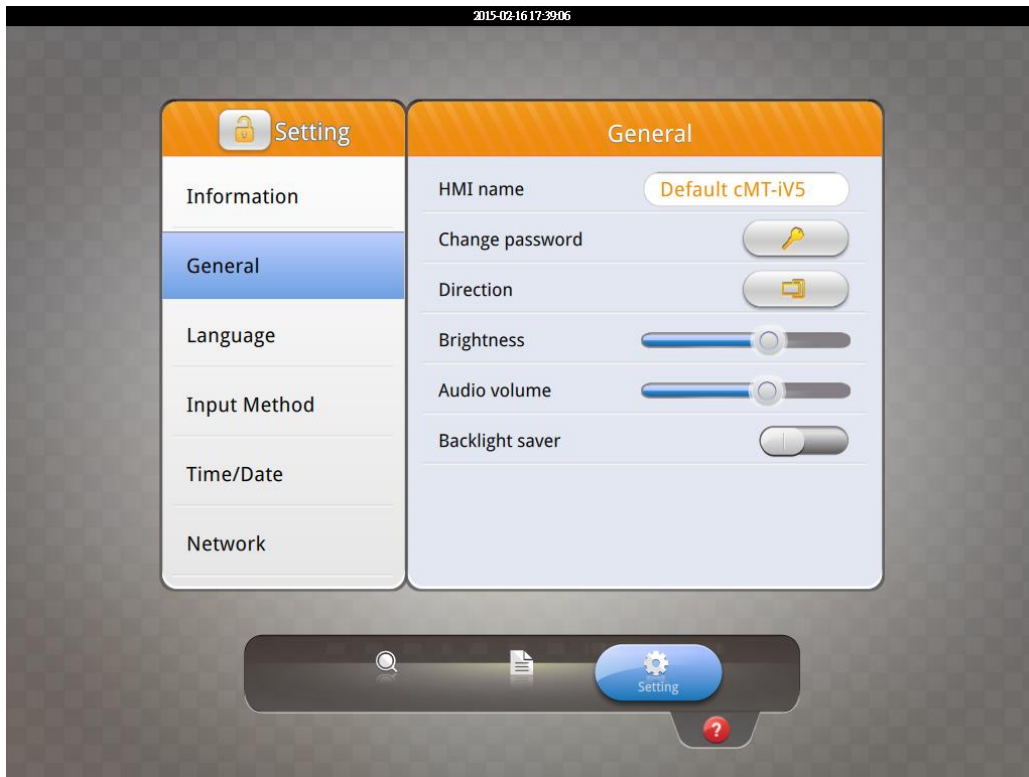
Tap Setting > Information to view the information about this cMT-iV5.

The information includes: Machine type, HMI name, IP address, Subnet mask, Gateway, Mac address, App. version, and OS. version.



## 2.2. General

In General tab, screen brightness and audio volume can be adjusted, and password can be changed. After entering the password, the HMI name can be viewed and changed. Tap the Direction icon to change the display direction.




## 2.3. Language

In Language tab, select an interface language. The options are: English, French, Italian, Spanish, Russian, Simplified Chinese, Traditional Chinese, Korean, and German.



## 2.4. Input Method

Add in keyboards of different languages. The options are: English, French, Italian, Spanish, Russian, Simplified Chinese (Pinyin), Traditional Chinese (Zhuyin), and German.

Tap  icon in the upper-left corner (a cMT-iV5 password is required). Enter the password and click OK, the Time/Date and Network setting tabs will be enabled.

## 2.5. Time/Date

In Time/Date tab, set the current system time and date.



## 2.6. Network


In Network tab, enable [Obtain an IP address automatically] or manually enter IP address, Subnet mask, Gateway, and DNS.



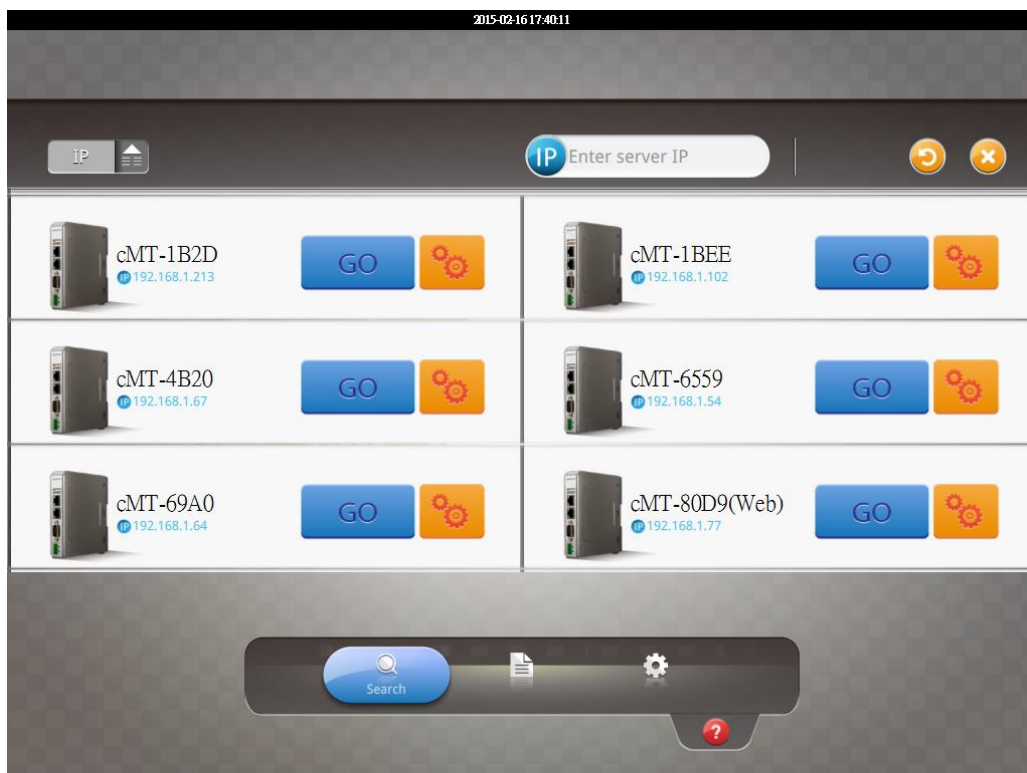


## 2.7. cMT-SVR System Setting

The system information of cMT-SVR can be set from cMT Viewer in cMT-iv5. Tap Search, find the













cMT-SVR and tap  to open cMT-SVR setting page.

See [cMT-SVR User Manual](#) for more information.



## Chapter3. cMT Viewer App

### 3.1. Introduction of icons

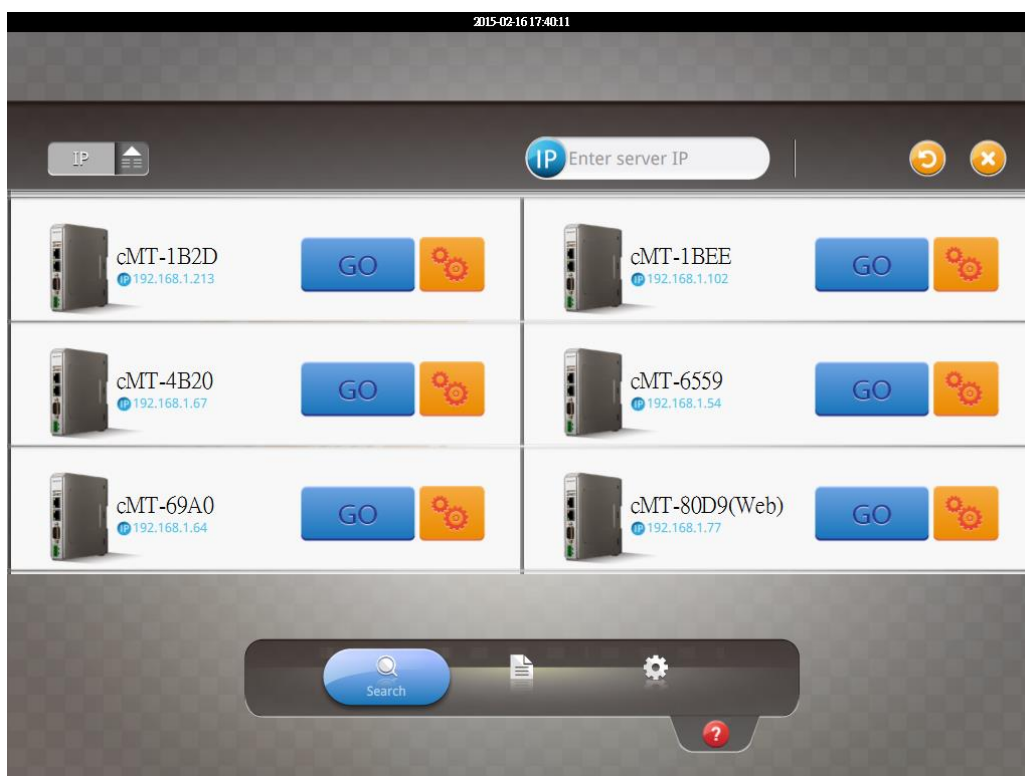
Icon	Description
	When running cMT Viewer, tap the Start Button to configure the settings.
	Project tab lists the logged in cMT-SVRs. Each cMT-iV5 can control three cMT-SVRs simultaneously.
	Search tab lists all the cMT-SVRs on the same network.
	History tab lists the cMT-SVRs previously logged in.
	System tab is used to adjust the brightness and volume, or view information.
	Tap this icon to make cMT-SVR CPU LED (green) blink for identify the cMT-SVR.
	Tap this icon to load cMT-SVR project to cMT-iV5 and run the project.
	Tap this icon to configure cMT-SVR system settings.
	In Search tab, sort cMT-SVRs according to IP address.
	In Search tab, sort cMT-SVRs according to HMI name.
	In History tab, clear all the login records.
	Tap this icon to understand more information about the features and operations.

### 3.2. How to load project file to cMT-iV5

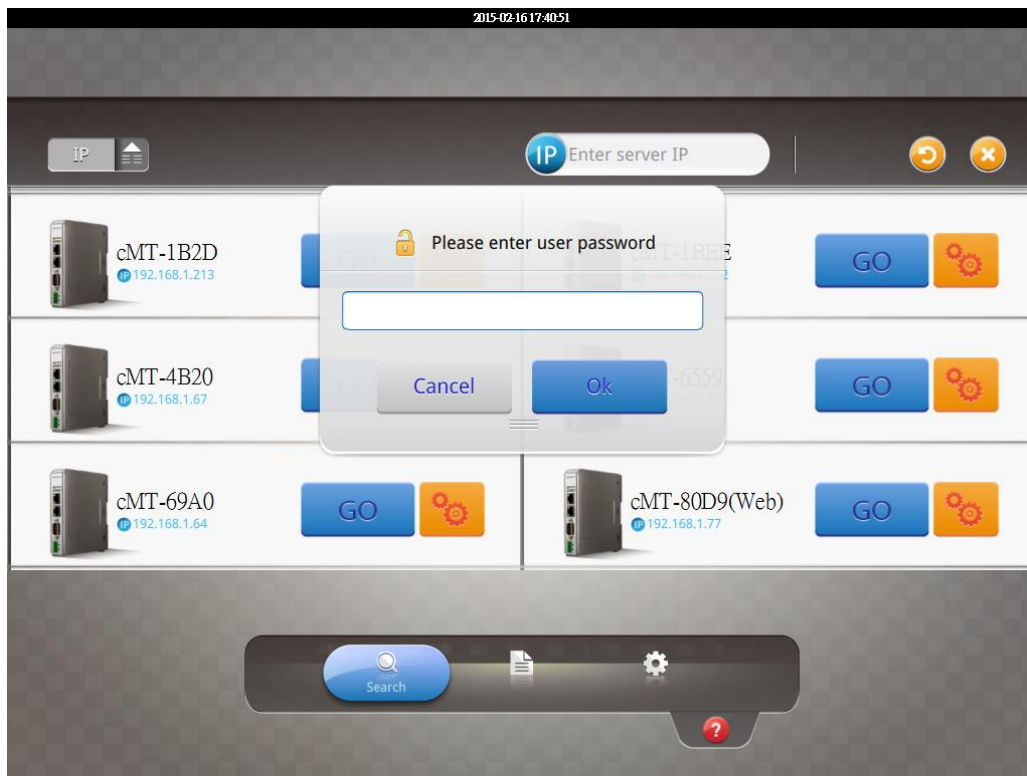
Step 1. Run cMT-iV5, tap Start Button as shown in the following figure.



Step 2. Search all the cMT-SVRs on the same network.



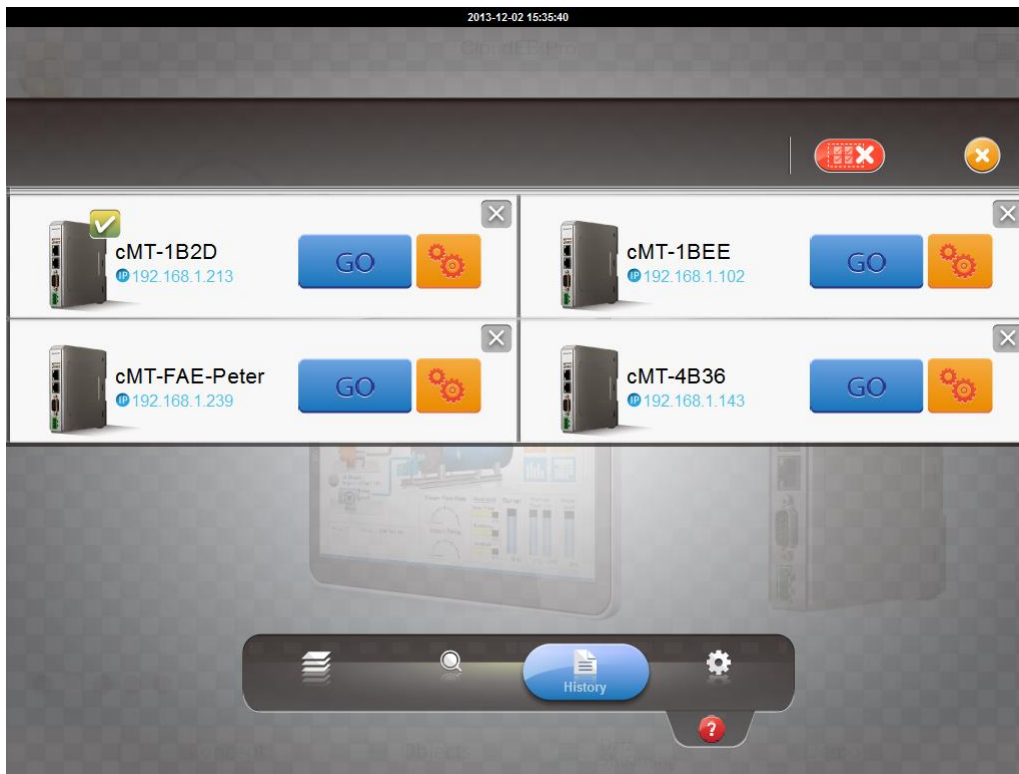
Step 3. Select the cMT-SVR, tap  and then enter password.





Step 4. The cMT-iv5 displays the project after the project is loaded




Tap Start Button to return to Search screen. To connect another cMT-SVR, repeat the preceding process to search for cMT-SVR and then load the project.



The  badge is displayed in the icons of the successfully connected cMT-SVRs.

One cMT-iV5 can login to up to three cMT-SVRs simultaneously. Once the limit has been reached the  buttons for other cMT-SVRs will be unavailable and grayed out.

### 3.3. How to switch between cMT-SVR projects

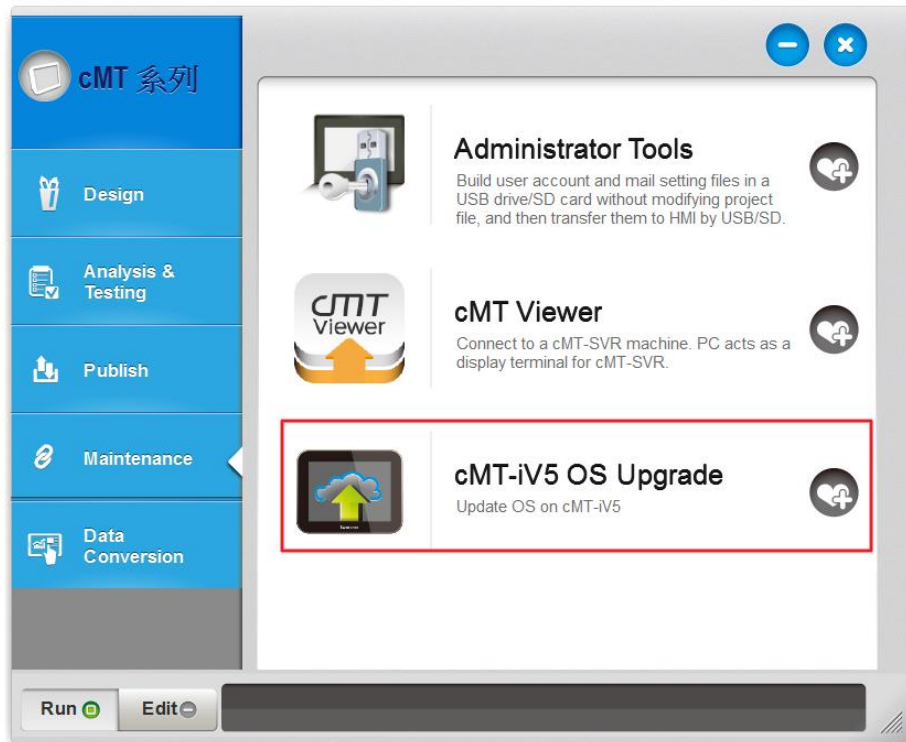
When multiple cMT-SVRs are connected, to switch between cMT-SVR projects, select from Project tab. To delete a project of a connected cMT-SVR, tap .



## Chapter4. Updating Firmware, OS

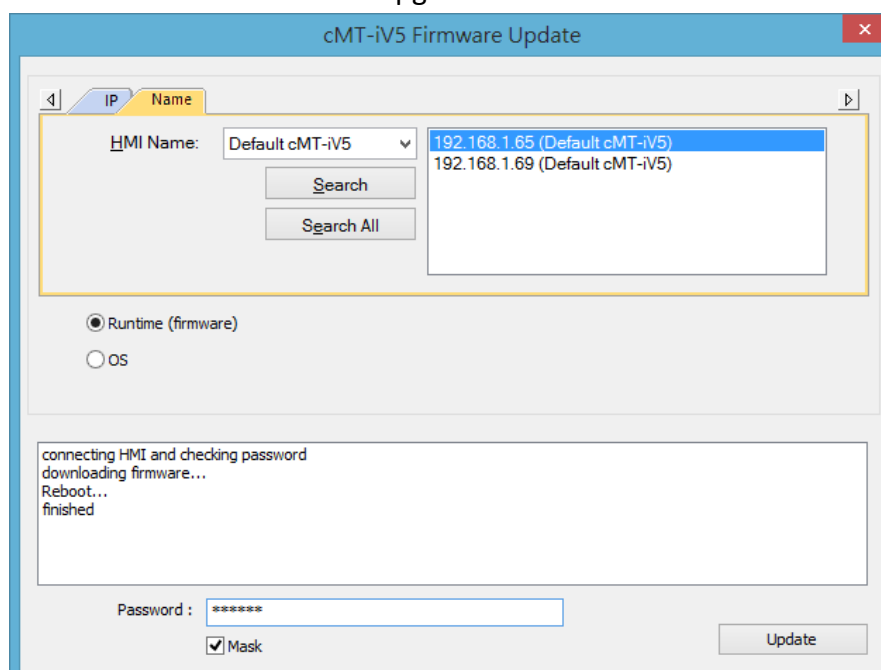
cMT Viewer (also called firmware) and OS version on cMT-iv5 can be updated via Ethernet.

Launch Utility Manager, select cMT Series, and click [Maintenance] > [iv5 OS upgrade] to run the iv5 upgrade program.



### 4.1. Updating cMT Viewer

- Step 1. Place the cMTViewer.iv5 file into the firmware folder under the EasyBuilder Pro installation directory. (The default directory: ebpro/firmware)
- Step 2. In the iv5 upgrade program select the HMI IP and select [Runtime (firmware)]. The firmware will be downloaded and upgraded to cMT-iv5.



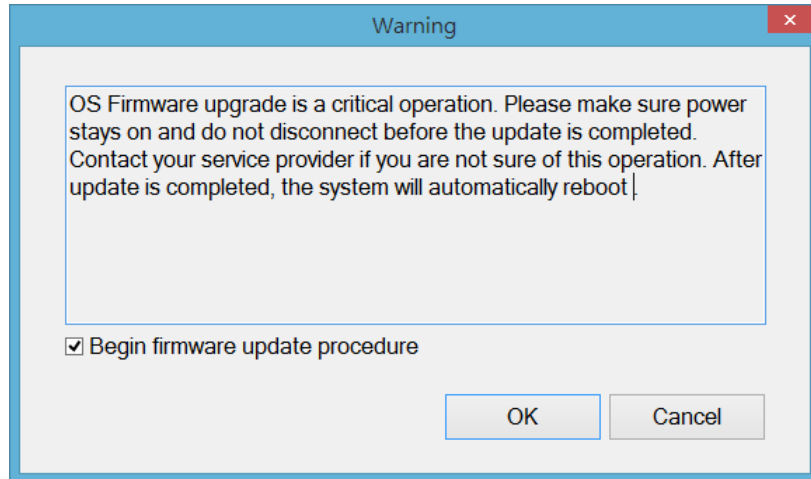
- Step 3. Upon completion the updated cMT Viewer version can be found in the Setting > Information tab.



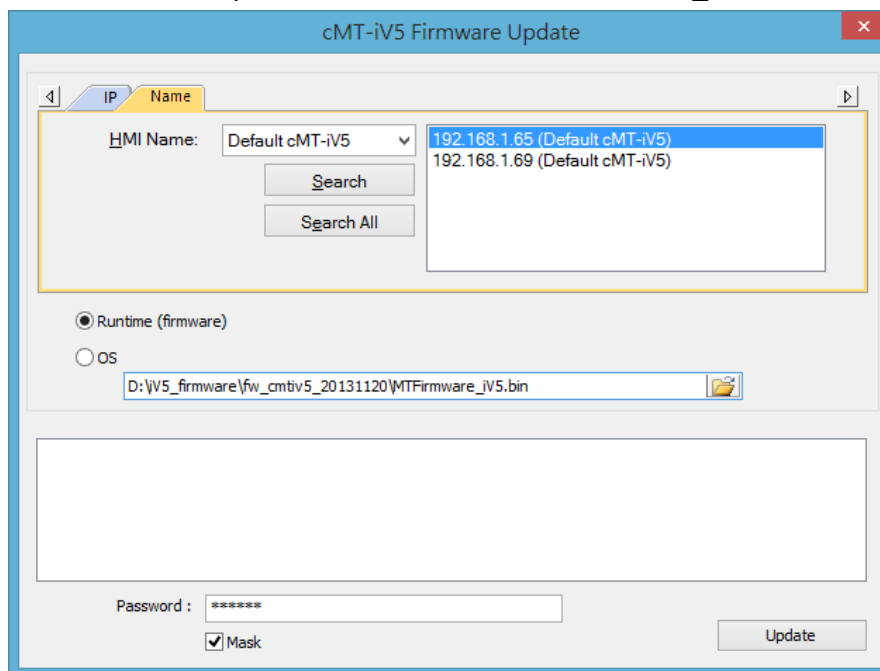
## 4.2. Updating OS

Please note that OS upgrade is a critical operation. Please make sure power stays on and do not disconnect before the update is completed.

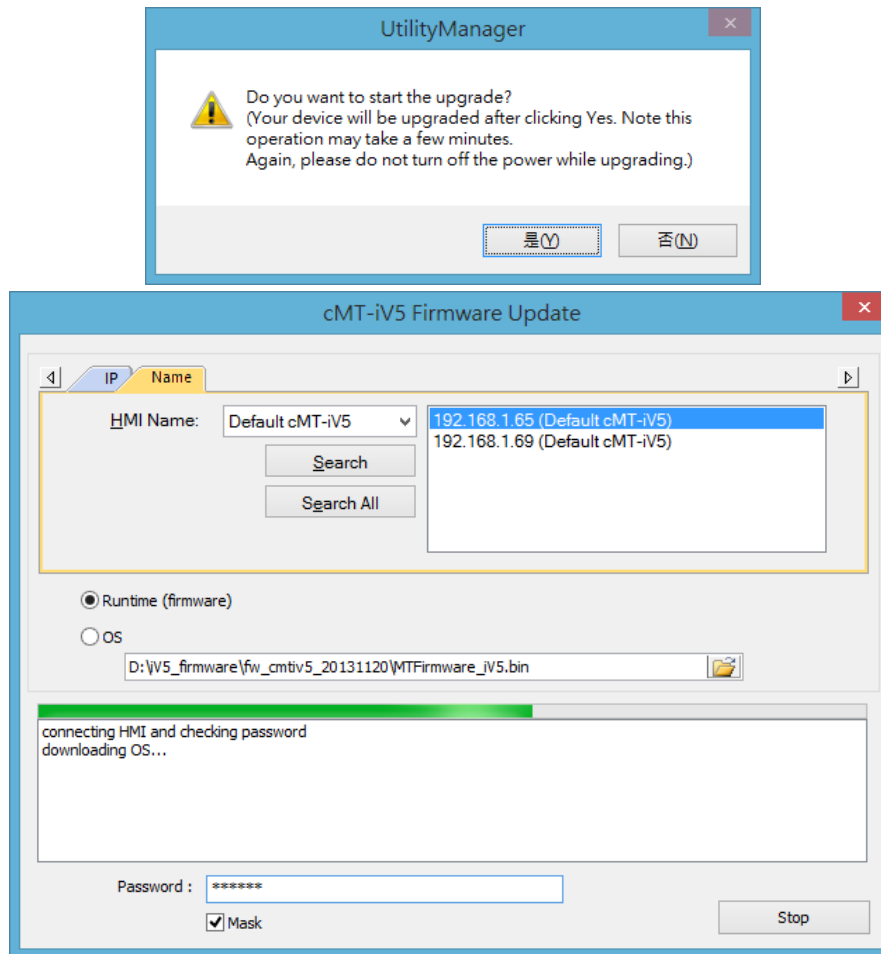
Step 1. In the iV5 upgrade program select the HMI IP and select [OS]. A warning message is displayed, select [Begin firmware update procedure] check box and click OK.



Step 2. Browse for the directory of the OS file named MTFirmware\_iV5.bin, and click [Update].



Step 3. A confirmation message is displayed. Click [Yes] and the OS will be downloaded and upgraded to cMT-iV5.



Step 4. Upon completion the updated OS version can be found in the Setting > Information tab.